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COMPLETE SPECIFICATION STANDARD PATENT

"AN AUTOMATED SURVEY SYSTEM"

The following statement is a full description of this invention, including the best
method of performing it known to me.

TITLE

"AN AUTOMATED SURVEY SYSTEM"

The present invention relates to an automated survey system.

Many organizations conduct surveys to gather information. This information is used

5 for a range of purposes including market evaluation and customer feedback. Such

surveys are commonly conducted by mailing out survey forms or having staff

telephone the respondents individually and verbally question them over the telephone.

Both of these methods involve the use of significant resources in preparing and

distributing or conducting the surveys. The process of compiling the survey results

10 and generating meaningful data is also generally time consuming.

Using the Internet is another method which has been used for conducting surveys.

This is generally done by setting up a web page which presents the survey questions

to the respondent. The respondent must then enter in the responses to the survey

questions via their keyboard and mouse. While this saves time and resources in

15 preparing and conducting the survey, many people find that filling out the survey

using this method is too time consuming. Setting up the survey can be a major

development exercise on it's own.

The present invention attempts to overcome at least in part some of the

aforementioned disadvantages of previous methods for conducting surveys and

20 compiling survey results.

In accordance with one aspect of the present invention there is provided an automated

survey system including an automated voice system, a database means and a web

server, wherein the automated voice system queries a respondent for responses to one

or more survey questions via an audio communication device and the respondent

25 responds by activating an appropriate data input means on the audio communication

device, the or each response being stored in the database means, and a data processing means is provided to process the or each response stored in the database means and transmit the results to the web server for graphical display on a web page.

The present invention will now be described, by way of example, with reference to the accompanying drawing, in which:

Figure 1 is a block diagram of the functional elements of an automated survey system in accordance with the present invention.

Referring to Figure 1, there is shown an automated survey system 10 including an automated voice system 12, a web server 14 and a database means 16.

The web server 14 can be accessed by a client 18 or a respondent 22 via a telecommunications network such as the Internet 20. The web server 14 is arranged to allow the client 18 to set up surveys and view survey result data and allow the respondent 22 a method of completing the survey.

In order to set up a survey using the automated survey system 10, the client 18 accesses a survey set up page on the web server 14. The survey set up page is designed to allow the client 18 to enter in one or more survey questions in text form and specify a number of pre-defined responses that may be selected in answer to the survey questions.

The client can further specify other survey data such as the maximum number of respondents, whether the survey can be completed by a respondent 22 using the Internet 20 or by telephone 24 using the telecommunications network, the time period for which the survey is valid or the type of voice used by the automated voice system 12.

Once the client 18 completes the survey set up page, the information is processed by a survey processing means 21 and transmitted to the automated voice system 12. The

survey processing means 21 also returns final survey details to the client 18 by displaying the details on a webpage. The final survey details may include things such as a survey ID number and a telephone number or web page which must be called to participate in the survey. The client 18 then distributes the appropriate survey details

5   to possible respondents by suitable means, such as a display on a web page or by mail. The automated voice system 12 is arranged to receive calls from respondents 22 using telephones 24 over an existing telecommunications network 26. The automated voice system 12 converts the survey questions entered by the client 18 from text to synthesised voice. When a respondent 22 calls, the automated voice system 12

10 answers the call and prompts the respondent 22 to enter the appropriate survey details such as survey ID number and password if required. The automated voice system 12 then prompts the respondent to answer the survey questions. The respondent 22 selects one of the pre-defined responses using the keypad of the respondent's telephone 24. Alternatively, the respondent can answer the questions using voice

15 recognition 12. The survey responses are then stored in the database means 16. Alternatively, the automated voice system 12 may be set up to initiate the call to the respondent 22. The automated voice system 12 would include in this case an electronic telephone directory database and would select numbers from this directory at random or by a pre-defined strategy. For example, the numbers may be selected

20 from one or more geographical areas.

The automated survey system 10 also includes a response data processing means 28. The response data processing means 28 extracts response data from the database means 16 and converts it to a form suitable for graphical display and transmits the formatted data to the web server 14. The response data may be converted, for

25 example, into table or chart format. The formatted data is displayed by the web server

14 on a survey results web page. The client 18 then accesses the survey data page on the web server 16 via the Internet 20 where the client 18 can view an up to date representation of the survey response data.

In an alternate embodiment, the respondent 22 responds to the survey questions using a computer, via the internet. The respondent's computer may have audio capability so that the automated voice system 12 could query the respondent 22. The respondent 22 would then provide responses to the survey questions by pressing an appropriate key on the respondent's computer.

In another form of the invention the text entered by the Client 18 can be read and stored in an audio format of a human voice and played back to the respondent 22 instead of the synthesised speech.

It will be appreciated that the response data processing means 28, database means 16, survey processing means 21 and automated voice system 12 may be implemented in one or more pieces of software on one or more computers. For example the database means 16, the response data processing means 28 and the survey processing means 21 may all be implemented in a software program on a single computer, which also houses the web server 14. The automated voice system 32 may be on a separate telephony computer.

Modifications and variations as would be apparent to a skilled addressee are deemed to be within the scope of the present invention.